

PSYCHOPHYSIOLOGY

Volume 20

January 1983–November 1983

Published Bimonthly by THE SOCIETY FOR PSYCHOPHYSIOLOGICAL RESEARCH
2380 Lisa Lane, Madison, WI 53711

COPYRIGHT © BY THE SOCIETY FOR PSYCHOPHYSIOLOGICAL RESEARCH, INC.

Contents of Volume 20

NO. 1, JANUARY 1983

Brain Event-Related Potentials as Indicators of Early Selective Processes in Auditory Target Localization. W.C. MC CALLUM, S.H. CURRY, R. COOPER, P.V. PO-COCK, AND D. PAPAKOSTOPOULOS.....	1
Eyeblinking During Problem Solving: The Effect of Problem Difficulty and Internally vs Externally Directed Attention. JAMES G. WOOD AND JAMES HASSETT.....	18
Aortic-Radial Pulse Transit Time and ECG Q-Wave to Radial Pulse Wave Interval as Indices of Beat-By-Beat Blood Pressure Change. MICHAEL H. POLLAK AND PAUL A. OBRIST	21
Extraversion and Multiple Levels of Caffeine-Induced Arousal: Effects on Overhabituation and Dishabituation. BARRY D. SMITH, RAYMOND J. WILSON, AND BRUCE E. JONES	29
Myoelectric and Force Feedback in the Facilitation of Isometric Strength Training: A Controlled Comparison. RICHARD J. COX AND THOMAS A. MATYAS	35
Pulse Transit Time and Blood Pressure: An Intensive Analysis. JAMES D. LANE, LISA GREENSTADT, DAVID SHAPIRO, AND EDUARDO RUBINSTEIN	45
Effects of Exhaustive Exercise on the Sleep of Men and Women. DAVID E. BUNNELL, WENDY BEVIER, AND STEVEN M. HORVATH.....	50
The Application of the Preparatory-Response Hypothesis to Changes in Base Skin Resistance. R.A. CHAMPION AND R. HODGE	59
Effects of Task Incentive on Cardiovascular Response in Type A and Type B Individuals. JAMES A. BLUMENTHAL, JAMES D. LANE, REDFORD B. WILLIAMS, JR., DAPHNE C. MC KEE, THOMAS HANEY, AND ALICE WHITE.....	63
The Effects of Instructions on Electrodermal Habituation. WILLIAM G. IACONO AND DAVID T. LYKKEN.....	71
Memory For Events Occurring During Arousal From Sleep. MICHAEL H. BONNET ..	81
Phasic Heart Rate Changes in Reaction Time, Shock Avoidance, and Unavoidable Shock Tasks: Are Hypothetical Generalizations About Different S1-S2 Tasks Justified? R.J.M. SOMSEN, M.W. VAN DER MOLEN, AND J.F. ORLEBEKE	88
P3 and Stimulus Incentive Value. H. BEGLEITER, B. PORJESZ, C.L. CHOU, AND J.I. AUNON	95
Sympathetic Neuronal Function and Left Ventricular Performance During Behavioral Stress in Humans: The Relationship between Plasma Catecholamines and Systolic Time Intervals. JAMES A. MCCUBBIN, JAMES E. RICHARDSON, ALAN W. LANGER, JOHN S. KIZER, AND PAUL A. OBRIST.....	102
<i>Instrumentation</i>	
Thermistor Measurement of Male Sexual Arousal. JEFFREY S. WEBSTER AND DAVID HAMMER	111
<i>In Memoriam</i>	
Marion A. Wenger . . . A Eulogy. BERNARD T. ENGEL.....	116
<i>Book Review</i>	
Psychophysiological Recording. Reviewed by CLINTON C. BROWN.....	118
<i>Letter to the Editor</i>	
Response to N. Schneiderman's Review. P.A. OBRIST.....	119
<i>Instructions to Authors</i>	120
<i>Subscription Blank for PSYCHOPHYSIOLOGY</i>	117
<i>Erratum</i>	17
<i>Announcements</i>	20, 44, 58, 70, 87

NO. 2, MARCH 1983

The Relationship Between Sexual Arousal Experience and Genital Response. JANICE KORFF AND JAMES H. GEER	121
---	-----

Contents of Volume 20

iii

Effects of an Attention-Demanding Task on Amplitude and Habituation of the Electrodermal Orienting Response. BIZA STENFERT KROESE AND DAVID A. T. SIDDELE.....	128
Stimulus Omission and Dishabituation of the Skin Conductance Response. DAVID A. T. SIDDELE, BOB REMINGTON, MARG KUIACK, AND ERICA HAINES	136
Psychopathy and Selective Attention During Performance of a Complex Perceptual-Motor Task. JEFFREY W. JUTAI AND ROBERT D. HARE	146
Recovery of Performance During Sleep Following Sleep Deprivation. ROGER R. ROSA, MICHAEL H. BONNET, AND JOEL S. WARM	152
The Effects of Directional Facial Cues on Electrodermal Conditioning to Facial Stimuli. ULF DIMBERG AND ARNE ÖHMAN	160
Event-Related Potential Correlates of Two Stages of Information Processing in Physical and Semantic Discrimination Tasks. WALTER RITTER, RICHARD SIMSON, AND HERBERT G. VAUGHAN, JR.	168
Skin Conductance Responses in Unmedicated Recently Admitted Schizophrenic Patients. A. BARTFAI, S. LEVANDER, G. EDMAN, D. SCHALLING, AND G. SEDVALL.....	180
An Evaluation of Trait, State, and Reaction Aspects of Activation Processes. JOCHEN FAHRENBERG, PETER WALSCHBURGER, FRITZ FOERSTER, MICHAEL MYRTEK, AND WOLFGANG MULLER	188
Bilateral Asymmetry of Skin Conductance Responses During Auditory and Visual Tasks. GAYLE M. BOYD AND IRVING MALTZMAN.....	196
A Consideration of Recent Criticisms of the T-wave Amplitude Index of Myocardial Sympathetic Activity. JOHN J. FUREDY AND RONALD J. HESLEGRAVE.....	204
<i>Methodology</i>	
Design and Analysis Issues and Strategies in Psychophysiological Research. KEITH E. MULLER, DAVID A. OTTO, AND VERNON A. BENIGNUS	212
Ambulatory Electrodermal Monitoring: Effects of Ambient Temperature, General Activity, Electrolyte Media, and Length of Recording. GRAHAM TURPIN, PHIL SHINE, AND MALCOLM LADER	219
<i>Instrumentation</i>	
A Device for Ambulatory Skin Conductance Monitoring. ALAN SIMPSON AND GRAHAM TURPIN.....	225
Opto-Electronic Belts for Recording Respiration in Psychophysiological Experimentation and Therapy. HANS STRASBURGER AND DIETER KLENK	230
<i>Book Review</i>	
<i>Perspectives in Cardiovascular Psychophysiology.</i> Reviewed by MICHAEL G.H. COLES	239
<i>Call For Papers, Twenty-Third Annual Meeting of the Society for Psychophysiological Research</i>	241
<i>Subscription Blank for PSYCHOPHYSIOLOGY.....</i>	203
<i>Announcements.....</i>	127, 179, 195, 224, 229, 238, 240, 242

NO. 3, MAY 1983

Cognitive Activity, Sleep Disturbance, and Stage Specific Differences Between Recorded and Reported Sleep. THOMAS J. COATES, JOEL D. KILLEEN, SHEILA SILVERMAN, JUNE GEORGE, EVELYN MARCHINI, STEPHANIE HAMILTON, AND CARL E. THORESEN.....	243
The Cardiac and Vascular Components of Pulse Transmission Time: A Computer Analysis of Systolic Time Intervals. ANDREW STEPTOE, GUIDO GODAERT, ALVIN ROSS, AND PAUL SCHREURS.....	251
"... 'twas ten to one; And yet we ventured...": P300 and Decision Making. DE-METRIOS KARIS, GREGORY L. CHESNEY, AND EMANUEL DONCHIN	260

Contents of Volume 20

Skeletal Muscular Patterning: Topographical Analysis of the Integrated Electromyogram. JOHN T. CACIOPPO, BEVERLY MARSHALL-GODELL, AND DONALD D. DORFMAN.....	269
Respiration, Stress, and Cardiovascular Function. PAUL GROSSMAN.....	284
Task Difficulty, Heart Rate Reactivity, and Cardiovascular Responses to an Appetitive Reaction Time Task. KATHLEEN C. LIGHT AND PAUL A. OBRIST.....	301
Forty Hertz EEG Activity in Alzheimer's Type Dementia. JOHN D. SPYDELL AND DANIEL E. SHEER.....	313
Does Aerobic Fitness Affect Sleep? SUSAN J. PAXTON, JOHN TRINDER, AND IAIN MONTGOMERY	320
Individual Differences in Imagery Ability and Pavlovian Heart Rate Decelerative Conditioning. JANE M. ARABIAN AND JOHN J. FUREDY	325
The Effect of Prolonged Stimulus Repetition on Autonomic Response and EEG Activity in Normal Subjects, Schizophrenic, and Nonschizophrenic Patients. ALVIN S. BERNSTEIN, KENNETH W. TAYLOR, PAUL STARKEY, JACK LUBOWSKY, SAMUEL JUNI, AND HERBERT PALEY	332
Type A Behavior and Psychophysiological Responses in Adult Women. KATHLEEN A. LAWLER, ANDRA RIXSE, AND MICHAEL T. ALLEN	343
Influence of Total Sleep Deprivation on Event-Related Potentials in Man. P. GAUTHIER AND C. GOTTESMANN	351
<i>Book Review</i>	
<i>The Psychology of Physical Symptoms.</i> Reviewed by J. MICHAEL LACROIX	356
Subscription Blank for <i>PSYCHOPHYSIOLOGY</i>	324
Announcements.....	283, 300, 312, 319, 342, 355, 357, 358

No. 4, JULY 1983

Presidential Address, 1982

The Pharmacology of Human Information Processing. ENOCH CALLAWAY.....	359
<i>Young Psychophysiologist Award Address, 1982</i>	
Psychophysiology and Genetics: A Key to Psychopathology Research. WILLIAM GEORGE IACONO.....	371
Energy Expenditure During Response-Dependent and Response-Independent Food Delivery in Rats. JASPER BRENER, KEITH PHILLIPS, AND ANDREW SHERWOOD... ..	384
The Psychophysiological Assessment of Muscle-Contraction Headache Subjects During Headache and Nonheadache Conditions. STEPHEN N. HAYNES, LINDA R. GANNON, JACQUELINE CUEVAS, PAULA HEISER, JOHNNIE HAMILTON, AND MARGARET KATRANIDES.....	393
Brain Potentials Related to Stages of Sentence Verification. IRA FISCHLER, PAUL A. BLOOM, DONALD G. CHILDERS, SALIM E. ROUCOS, AND NATHAN W. PERRY, JR.	400
<i>Methodology</i>	
An Arterial to Peripheral Pulse Wave Velocity Measure. J. RICHARD JENNINGS AND SAMUEL CHOI	410
<i>Abstracts</i>	
Abstracts of Papers Which Will Be Presented at the Twenty-Third Annual Meeting of the Society for Psychophysiological Research	419
Announcements.....	399, 409, 479, 480

No. 5, SEPTEMBER 1983

Cardiac Response to Speech Sounds in Preterm Infants: Effects of Postnatal Illness at Three Months. NATHAN A. FOX AND MICHAEL LEWIS.....	481
Hemispheric Asymmetry for Word Perception: Behavioral and ERP Evidence. SHLOMO BENTIN AND MOSHE FEINSOD	489

Contents of Volume 20

v

Electrodermal Nonresponding Among College Undergraduates: Temporal Stability, Situational Specificity, and Relationship To Heart Rate Change. ROBERT F. SIMONS, BARBARA D. LOSITO, SANDRA C. ROSE, AND FRANK W. MAC MILAN, III.....	498
EEG Changes During Tobacco Withdrawal. RONALD I. HERNING, REESE T. JONES, AND JOHN BACHMAN	507
Information and States of Motor Readiness: Their Effects on the Covariation of Heart Rate and Energy Expenditure. ANDREW SHERWOOD, JASPER BRENER, AND DOUGLAS MONCUR	513
Transfer of EMG Training: Another Look at the General Relaxation Issue. JOHN G. CARLSON, CECELIA A. BASILIO, AND JAMES D. HEUKULANI	530
Similarity of Eye Movement Characteristics in REM Sleep and the Awake State. J. H. HERMAN, D. R. BARKER, AND H. P. ROFFWARG	537
Cardiac and Metabolic Responses to "Space Invaders": An Instance of Metabolically-Exaggerated Cardiac Adjustment? J. RICK TURNER, DOUGLAS CARROLL, AND HAZEL COURTNEY	544
The Effects of Initial Levels of Sweat Duct Filling and Skin Hydration on Electrodermal Response Amplitude. ROBERT EDELBURG	550
Estimating Neonatal Oxygen Consumption from Heart Rate. ROBERT WOODSON, TIFFANY FIELD, AND REENA GREENBERG	558
REM and NREM Sleep Reports: Comparison of Word Frequencies by Cognitive Classes. JOHN ANTROBUS	562
Effects of Water Temperature on Some Noninvasively Measured Components of the Human Dive Reflex: An Experimental Response-Topography Analysis. JOHN J. FUREDY, JAMES W. MORRISON, RONALD J. HESLEGRAVE, AND JANE M. ARABIAN	569
Psychophysiological Assessment of Statements About Pain. JOSEPH G. SALAMY, DAVID J. WOLK, AND DAVID WM. SHUCARD	579
Systolic Blood Pressure and a Simple Reaction Time Task. KEN PALLER AND DAVID SHAPIRO	585
<i>Methodology</i>	
Digital Inverse Filtering Methodology For Physiological Signals. D.J. DOYLE AND M.L. HYDE	591
<i>Instrumentation</i>	
Telemetric Skin Conductance With Computer Interface. CHRISTOPHER DE B. WHITE AND PETER CHARLES	597
<i>Historical Note</i>	
Helga Eng: A Norwegian Precursor to Darrow and Lacey. SVEN SVEBAK	600
<i>Instructions to Authors</i>	602
<i>Subscription Blank for PSYCHOPHYSIOLOGY</i>	536
<i>Announcements</i>	506, 529, 543, 549, 561, 584

NO. 6 NOVEMBER 1983

The Effects of Age and Prestimulus Duration upon Reflex Inhibition. THOMAS J. HARBIN AND W. KEITH BERG	603
Effects of Stimulus Intensity on Cardiovascular Activity. GRAHAM TURPIN AND DAVID A.T. SIDDLER	611
Event-Related Potentials During Controlled and Automatic Target Detection. JAMES E. HOFFMAN, ROBERT F. SIMONS, AND MICHAEL R. HOUCK	625
Affective, Behavioral, and Avoidance Responses on the Visual Cliff: Effects of Crawling Onset Age, Crawling Experience, and Testing Age. JOHN E. RICHARDS AND NANCY RADER	633
Sleep Loss and Nap Effects on Sustained Continuous Performance. DANIEL J. MULLANEY, DANIEL F. KRIKE, PAUL A. FLECK, AND LAVERNE C. JOHNSON	643

Contents of Volume 20

The Effects of Monetary Incentive and Frustrative Nonreward on Heart Rate and Electrodermal Activity. DAN T. TRANEL	652
Motor Preparation Changes in Amplitude of Achilles Tendon Reflexes During a Fixed Foreperiod of One Second. C.H.M. BRUNIA	658
P300 Latency Correlates with Digit Span. JOHN POLICH, LAWRENCE HOWARD, AND ARNOLD STARR	665
Sudden Swimming Deaths: A Psychomotor Reinterpretation. YITZCHAK M. BINIK AND M.J.L. SULLIVAN	670
Self-Control of Digital Temperature: Physiological Factors and Transfer Effects. ROBERT R. FREEDMAN AND PETER IANNI	682
Biological Rhythms in Arousal Indices: A Potential Confounding Effect in EEG Biofeedback. JOHN GERTZ AND PERETZ LAVIE	690
T-Wave Amplitude as an Index of Cardiac Sympathetic Activity: A Misleading Concept. PETER J. SCHWARTZ AND THEODORE WEISS	696
On the Utility of T-Wave Amplitude: A Reply to Schwartz and Weiss. RONALD J. HESLEGRAVE AND JOHN J. FUREDY	702
<i>Methodology</i>	
Vascular Unloading Method for Noninvasive Measurement of Instantaneous Arterial Pressure: Applicability in Psychophysiological Research. YUKIHIRO SAWADA, KEN-ICHI YAMAKOSHI, AND HIDEAKI SHIMAZU	709
Abdominal Temperature Changes During Male Sexual Arousal. J. GAYLE BECK, DAVID H. BARLOW, AND DAVID K. SAKHEIM	715
<i>Subscription Blank for PSYCHOPHYSIOLOGY</i>	701
<i>Erratum</i>	657
<i>Announcements</i>	624, 642, 689, 708, 714

British Journal of Medical Psychology***Editor: Sidney Crown (The London Hospital)*****Contents of volume 56, Part 2, 1983**

- F. N. Watts. Strategies of clinical listening
 S. A. Griggs & D. W. Green. How to make a good cup of tea: Exploring the scripts of thought-disordered and non-thought-disordered patients
 M. Norris. Changes in patients having treatment at the Henderson Hospital therapeutic community during 1977-81
 W. Vandereycken & R. Pierloot. Drop-out during in-patient treatment of anorexia nervosa
 J. Owusu-Bempah & D. C. Howitt. Self-modelling and weight control
 J. Bicknell. The psychopathology of handicap
 A. Furnham & J. Pendred. Attitudes towards the mentally and physically disabled
 P. A. Bick. Physiological and psychological correlates of motion sickness
 J. Bancroft & K. Hawton. Why people take overdoses: A study of psychiatrists' judgements
 R. Pugh. An association between hostility and poor adherence to treatment in patients suffering from depression

Volume 56, 1983, 4 parts £42.00 (US\$90.50)

Foreign affiliates of the Society are entitled to purchase journals at a special price of £5.00 per volume. Further details from and subscriptions to:

The British Psychological Society

The Distribution Centre, Blackhorse Road, Letchworth, Herts SG6 1HN, UK

